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Sculpture in Garden Art.

DURING the month of May an artistic spectacle of a novel sort will be set before the people of New York. The National Sculpture Society will then hold its second annual exhibition in the spacious galleries of the Fine Arts Building on Fifty-seventh Street. It will not be confined to works recently produced, or to American works exclusively, but will include a retrospective collection, and, therefore, even as regards the sculptor's art alone, will be novel and ought to be exceptionally attractive. But the most interesting announcement is that the purpose of the exhibition will be "to show the possibilities of combining sculpture with flowers and plants in both natural and formal gardening and in interior decoration." To this end the services of Mr. N. F. Barrett, landscape-engineer, and of Mr. Thomas Hastings, architect (of the well-known firm of Carrère & Hastings), have been secured to prepare the designs for the arrangement of the galleries and to superintend their execution, while Messrs. Pitcher & Manda will supply the plants which their schemes will require.

It is believed, the circular of the Sculpture Society adds, that the tendency of such an exhibition will be "to encourage a larger use of sculpture in the embellishment of the villas and houses of America, and to give a new and powerful impulse to the production of ideal sculpture throughout the nation." Both these aims are, indeed, worthy ones. Even cultivated Americans often regard the sculptor's art as valuable merely for the making of portraits or of monumental memorials in which portraiture plays a prominent part. They appreciate its peculiar commemorative utility, but either wholly ignore its role as a ministrant to the love of beauty, or consider this distinctly subordinate to what may be called its biographical function. Or, at the best, they admire classical works, consecrated by the verdict of time, and covet reproductions of them for private or public enjoyment. The cases are rare when the art, as practiced by living masters, is sympathetically approached from its purely æsthetic side. This is proved in our streets and parks, as well as in the interior of our houses and public buildings, although, as has been more than once said in these pages, even those classes of our population which have the least education are quick to appreciate the fact if a commemorative statue is unusually successful from the æsthetic point of view.

In the time of our grandfathers a wider feeling for the beauty of statuary seems to have existed in this country. But the taste of that time was as childishly crude as its confidence in itself was childishly frank. Indoors the result was a profusion of foolish sentimental figures and models of Trojan's Column and the Leaning Tower of Pisa—often brought home as trophies from an Italian tour—of tomb-like, clumsily carved white marble mantelpieces, and of huge alabaster urns which looked like receptacles for the ashes of past generations—all being placed where it was supposed they would show to the most striking advantage, without much thought whether or no they would harmonize with their surroundings, whether or no they would increase or decrease the general beauty of the interior. And outdoors the result was urns and figures of the same sort placed in the same independent fashion, and accompanied, perhaps, by iron dogs or deer, wildfowl or wild beasts, supposed either to give dignity to the approach they flanked, or, more cunningly set amid the plantations, to afford the chance observer the high delight of a momentary belief in their vitality. As knowledge and taste have grown among us, puerilities like these have disappeared, or they survive only in isolated localities, or as piously preserved, with smiling tolerance, out of respect to some bygone kinsman. But, as yet, things of a better sort, disposed in better ways, have seldom come to take their place, and it is a place which should by no means be left empty. The sculptor as well as the painter should play his part in decorating and furnishing the interiors of our public and private buildings, and the sculptor as well as the landscape-artist and the gardener should help to adorn their surroundings. But in the one case, as in the other, two things should be considered: the intrinsic beauty of the sculptured work, and, in its character and its placing, its appropriateness to its environment. One of the most important lessons taught by the Chicago Fair was the noble decorative significance of the sculptor's art, and it was taught so emphatically because nowhere had the sculptor been allowed to feel that he could work in independence of his brother artists. Already we see the effect of this lesson in the increased amount and excellence of our architectural sculpture. And the coming exhibition, if artistically successful, may do much to assist us to a knowledge of the value of idealistic sculpture for outdoor use and of the proper ways of using it.

Fully to display the sculptor's decorative power, formal gardening schemes need great avenues of trees and great stretches of water, giving room for the introduction of stately or graceful figures in symmetrical array, for noble lengths of balustrading and fountains of monumental size. Nothing of this sort could, of course, be attempted within four walls, even were the vast interior of the Madison Square Garden to be the chosen area, and even did all the horticulturists in America contribute of their products. And with regard to naturalistic schemes the case is similar. In such schemes the sculptor can never play a dominant part, as he may in certain portions of formal schemes, and even his part as a docile assistant is rather narrowly limited, and should be played with the greatest care and discretion. Nothing is more certain to injure a naturalistic gardening scheme of broad character than the presence of the smallest piece of sculpture inappropriately placed; and, as the Parc Monceau, in Paris, proves, even Frenchmen have conspicuously sinned in this respect, admirably though they use works of sculpture in more formal pleasure-grounds like the Luxembourg and the Tuileries Gardens. We note with regret, by the way, that the Sculpture Society's circular speaks of its exhibition as including "an exhibition of landscape-gardening." In art, as in everything else, it is important that words be used with precision, lest confusion of thought arise from verbal inaccuracy; and it would be a very confused thought,

indeed, that could picture the interior of an apartment transformed into any scene having a "landscape" character. Landscape-gardening is one branch of the art; naturalistic gardening on a small scale is another, with quite different ideals to meet as well as means to employ. No more than the latter branch, on its smallest scale, can be attempted in the coming exhibition, but, even so, right management will be still more difficult than with small formal schemes.

All this is said not to discourage in any degree the projectors of the exhibition, but to show them, rather, that the difficulties which they will meet will be appreciated by all observers who have thought about work such as they have in hand. It is a good sign that an architect, as well as a gardener, has been engaged to carry out the interesting conception of the Sculpture Society, for, in all formal gardening arrangements, architectural ideas must prevail, and to them both the gardener and the sculptor must accommodate himself. We wish these artists every success in their novel task, and bespeak wide public attention for their exhibition when its doors shall open, feeling assured that they will show us many things worth seeing in themselves, and, perhaps, some which will be of utility, as giving hints and suggestions, if not actual models, for the introduction on a much larger scale of more beauty and more variety into our public parks and the surroundings of our homes.

Honey Locust in the West.

THE Honey Locust has a much greater western range than the Black Locust, and it possesses many qualities that should make it a general favorite. It has been extensively planted, but has been used to a limited extent only. Indeed, so far as I know, its only use, except for fuel, has been as post-timber. The wood is hard and takes on a beautiful polish, while in color and grain it is much more attractive than several fashionable cabinet woods.

Repeated efforts to grow the Honey Locust at the Agricultural College of South Dakota failed. The young seedlings grew well the first year, but were killed, root and top, the first winter. In north-western Iowa, twenty-five miles north-east of Sioux City, there is a fine specimen of thornless Honey Locust, and in the grounds of the Iowa Agricultural College is the handsomest thornless Honey Locust tree I have ever seen. Its trunk is about two feet in diameter; the crown is round and well developed, with a spread of branches of about fifty feet across, and altogether it is a tree of great beauty.

Professor Silas Mason, of the Kansas Agricultural College, planted a quantity of seed of the thornless variety of the Honey Locust four years ago, and has a half-acre plat of trees from four to nine feet high. Not more than half the trees are free of thorns, and there is every gradation from smooth to very thorny specimens. These thornless Honey Locusts cannot be too highly recommended for lawn planting. They give a light, though sufficient shade, and their finely divided foliage and long brown fruit-pods make them very attractive.

On the dry uplands of western Kansas the Honey Locust is one of the most flourishing trees, as is proven by the fine growth of a plat of the species at Ogallah, where it surpasses the Black Locust in size. At Hutchinson, in the moist soil of the Arkansas valley, it also makes fine growth, thus proving its wide adaptability. Thrifty trees were seen in the suburbs of Denver, grown under irrigation. Honey Locust grows well throughout central and southern Nebraska. In an eight-year-old plat at Lincoln specimens twenty feet high were seen.

A number of years ago the Honey Locust was extensively tried as a hedge-plant, but it does not lend itself well to this use. It is too rampant a grower, and no amount of lopping, weaving, bending and pruning can keep it within reasonable bounds.

Washington. *Charles A. Keffer.*

The European House Sparrow in America.

A VERY complete history of the naturalization of the so-called English sparrow, Passer domesticus, on this continent, together with some of the results of this introduction, was recently given by Mr. H. C. Oberholser, in a paper read before the Brooklyn Institute of Arts and Sciences. A condensation of the more important portions of this paper is herewith given:

The introduction into the fauna of any country of any foreign species is always fraught with the danger that the absence of natural checks will permit it to multiply with undue rapidity and develop destructive characteristics unknown in its home. There are certain species of birds, for example, which it is difficult to naturalize in another country, even when the conditions seem most favorable, as is proved by the frequent attempts to introduce the European goldfinch and the skylark into the United States. But when a species is found sufficiently robust to make itself at home under a new environment its very vigor will insure the development of many injurious propensities. If the persons who introduced the English house sparrow into this country had made inquiries among the farmers of Great Britain and Europe in regard to the reputation of this bird, they would have probably learned that it was hardly a safe species to colonize, having already shown what might happen by its destructiveness in Australia and New Zealand. The sparrow, however, never developed its full power for evil until it came to America, where its destructive effects have only been paralleled by the introduction of the rabbit into Australia and of the mongoose into Jamaica.

In the fall of 1850 eight pairs of sparrows were brought to Brooklyn by the directors of the Brooklyn Institute, carefully housed during the winter, and liberated during the spring. The shade-trees of Brooklyn and New York were then being defoliated by the caterpillar of the white Eugonia moth, and it was supposed that the sparrow would suppress this insect. These birds did not multiply fast enough, and in 1852 fifty more were liberated in New York harbor and a colony was placed in Greenwood Cemetery. From 1854 to 1858 sparrows were brought into Portland, Maine, and Peace Dale, Rhode Island, and in 1860 more were brought to New York and to Quebec. In 1867 eighty birds were liberated in New Haven, and in 1868 twenty were imported to Boston. One thousand were brought to Philadelphia the same year; forty were carried to Cleveland, and soon after they were transported from the eastern cities to San Francisco, Salt Lake City, Halifax and other places. Perhaps this widespread introduction was based partly on sentiment, because certain naturalized Europeans found in the chirp of the sparrow something which reminded them of their native land. But erroneous reports of the benefit derived from the presence of these birds in the cities where they were first imported made such a demand for them that it was cheaper to bring sparrows directly from Europe than to pay the price asked for them in New York city.

In the early years of their introduction the sparrows multiplied with even more than their natural rapidity because they were provided with food, shelter and nesting-places, and watched over with tender solicitude. They are subject to few contagious diseases, and their natural enemies are few. The northern shrike and the screech-owl are their only serious foes among birds, although there are others which attack them occasionally, but since the sparrows associate closely with man, this in a measure relieves them from danger; and, besides this, they have developed a wariness which enables them easily to elude even the cunning cat and other domestic animals. Where it is understood that they are as palatable eating as the reedbird, many of them are annually destroyed, but this is only in isolated localities, and it makes small impression on the great mass. The natural hardiness of the bird, its ability to endure Canadian winters and the heat of the tropics makes it at home everywhere when once established; its natural aggressiveness and marvelous fecundity aids its surprising spread. Where the ground is covered with snow for a long time, and makes it difficult for the sparrow to obtain nourishment, large numbers of them die, but it is from hunger, and not from the severity of the climate. The blizzard of March, 1888, destroyed thousands of them in this neighborhood, and for some time they appeared in diminished numbers. A severe storm in Covington, Kentucky, once choked the sewers with dead birds, but flocks from the neighboring territory soon rushed in to fill up the gap. We may consider 1870 as the year when the sparrow had become established on this continent, and in five years it had spread over an area of five hundred

square miles in the United States and Canada, and in seven years more it had spread over more than a million square miles, and, no doubt, at the present time it can be found in every state and territory in the Union, while it has increased the extent of its habitat in the states where a few years ago it only existed in isolated colonies.

The structure of the sparrow's bill shows that it is essentially granivorous, and yet at times it destroys many insects. Just how much good is done by the bird in this way can only be found by examining large numbers of their stomachs. Investigation of this sort proves that the sparrow is a miserable failure as an insect destroyer. It never makes a practice of catching insects except to feed its young, and these insects are usually of those species which are most easily secured, and are found where the sparrow most commonly resorts. Only in exceptional cases has it ever made any inroads into the ranks of insect pests. It is even open to question whether it destroyed any of the Eugonia moths in New York, for which it was originally imported. Young sparrows eat many more insects than adult birds, and yet insects are not necessary for their healthful existence, and they can be reared exclusively on a vegetable diet. Out of 522 dissections, including young and old, made by the United States Department of Agriculture, the presence of insects was shown in only ninety-two, or seventeen and six-tenths per cent., of the stomachs examined, while the actual proportion of insect food to other food did not exceed two per cent. Besides this, the greater portion of the insect food taken by these sparrows consisted of species which are either neutral or directly beneficial. A single yellow-billed cuckoo was found to have destroyed 250 fall web-worms besides other insects, and all of them injurious, a bulk equal to the entire amount of insect food in all the 522 sparrows examined. In the city of Albany during 1885 the caterpillars of the white-marked tussock moth were so abundant that they were seen crawling everywhere, even over the boxes that sheltered the sparrows, and yet the birds were never known to disturb the insects. On the contrary, by driving away other birds which naturally destroyed them, the sparrows fostered the increase of the pest. These and other species of injurious insects have thus increased with alarming rapidity in localities where the cause was evidently the protection accorded by the presence of the sparrow.

The sparrow feeds to some extent upon the seeds of weeds, but this benefit is very slight, since the weeds grow where the destruction of their seeds is of little importance. Grain and the seeds of grasses are regularly sought by them, and they do much more injury than is generally imagined. Wheat is their favorite grain, and the damage done to this alone amounts to one-quarter of the whole crop. They usually attack this as soon as the kernels mature, but even when left in shock or stack it is still subject to depredation, for the sparrows devour all the grain in the exposed sheaves. To vary their bill of fare they also attack grapes, cherries, apples, pears and small fruits and vegetables, and the damage done to these crops is always serious. Ornamental vines, evergreen trees and hedges are subject to serious injury when the birds select them for a nesting-place. A sparrow has been known to strip the buds and blossoms from the entire branches of fruit and ornamental trees, nibbling off many times more than it could possibly eat, apparently for amusement, and the dissection of birds shot while thus engaged failed to disclose the presence of any food, excepting the buds and portions of the blossoms. It may be readily seen, therefore, that the damage to fruit trees must be considerable, and much of the injury usually attributed to other causes can probably be traced to this source.

The sparrow is naturally pugnacious and he persecutes many native birds, assailing the chipping sparrow in flocks, and even larger birds when they are rendered by accident defenseless, pursuing them furiously until they are dead. They have been known to attack young robins in their nests, and even domestic pigeons and common fowls are molested for the purpose of robbing them of their food. The scarcity of many of our native birds about our dwellings is to a great extent owing to their quarrelsome dispositions. They seem absolutely fearless and will attack a blue jay or a crow, and by the force of numbers compel even these to retreat. But such birds as associate naturally with man are the greatest sufferers. Among these the blue birds, the purple martin, the robin, the house wren and several swallows are most frequently and seriously disturbed, because their nesting-places are naturally coveted by the sparrow, and many other birds are driven from the vicinity of human dwellings where they naturally congregate.

The sparrow has manifestly few good qualities, and all arguments urged in its defense have been abandoned one by one. The evidence against its character is conclusive: it is a parasite, and its extermination would be a desirable thing. The difficulties in the way of this, however, seem insurmountable. Bounties offered are practically useless, since so insignificant a number are killed that their loss has no apparent effect on the steady increase. An estimate based on the lowest bounty which would produce any desired result shows that to exterminate the species in Ohio alone would cost the state two and a quarter millions of dollars, and even this would not avail unless the adjoining states pursued a similar course. Since the total extirpation of the pest seems impracticable, this article has been prepared simply to show the true character of the bird and to set forth the necessity of some action looking toward the restriction of its unlimited multiplication on this continent.

Foreign Correspondence.

London Letter.

PHAJUS BERNAYSII.—This is the handsomest of the many forms of Phajus which botanically are only varieties of P. grandifolius, but which for horticultural purposes are accorded specific rank. It is flowering now at Kew for the first time, having been received two years ago from Fiji as "a distinct, probably new, Phajus, which I found in the woods here, and which has white flowers." In general characters it resembles typical P. grandifolius, the pseudo-bulbs being two inches in diameter, the plicated bright green leaves two and a half feet long and four inches wide, the erect scapes three and a half feet high, with sheathing bracts four inches apart and a dozen or more flowers in a compact raceme at the top. Each flower is four inches across, the sepals and petals equal in size, pure white outside, pale sulphur-yellow inside, the folded lip being white, with a faint tinge of yellow inside. The plant grows freely under stove treatment and potted in loose loam. There is a figure in the *Botanical Magazine*, 1873, t. 6032, of a plant imported from Queensland by Messrs. Veitch & Sons, and named in compliment to Mr. Bernays, of the Queensland Acclimatization Society. This plant is darker in color than that now in flower at Kew, and it is said to be a native of Queensland. In their *Orchid Manual*, part vi., page 11, Messrs. Veitch state that the plant flowered by them "is of little value as a horticultural plant on account of the flowers being often self-fertilizing before they expand, and thence lasting but a short time in perfection." All the flowers on the plant now in bloom at Kew are perfect in form, and the oldest flower has been expanded a week, and is still as fresh as the flower which opened to-day. In color it is quite distinct and delicately beautiful in the pale sulphur or primrose-yellow of the inner face of the segments. The type of P. grandifolius is not generally popular because its flowers are dull in color, a character which certainly does not belong to P. Bernaysii.

ALBERTA MAGNA.—A second plant of this south African Rubiaceous plant is now flowering in a greenhouse at Kew, and from it a picture has been prepared which will shortly be published in the *Botanical Magazine*. When calling attention to it in my letter of a few weeks ago I omitted to mention that, in addition to the brilliant red color of its terminal panicles of flowers, it has a second, and probably more lasting, attraction in its leaf-like calyx-lobes, which are spathulate in form, an inch long and colored bright red. When in flower the calyx-lobes are small and of uniform size, but after the flowers have faded one or two of the four calyx-lobes grow, and apparently assume as bright a color as the flowers. This character is not peculiar to Alberta, but may be seen in the allied genera, Mussœnda and Howardia. The Alberta is a handsome evergreen shrub. In flower it suggests Embothrium coccineum.

CACTUS VS. MAMILLARIA.—If we adopt the western proposal to substitute the name Cactus for Mamillaria, thereby limiting the use of the term now employed for the whole order to a single genus of that order, we shall, in consequence, be forced to invent a new family name. The term Cactus, as now used, has the same general meaning as have those of

Orchid, Fern, Palm, etc. We have Cactus societies, Cactus journals, Cactus shows and Cactus collections. What are they to do for a name? I argue the question solely from the standpoint of convenience, and I claim for the old arrangement the right to stand which long usage and suitability give it. Mamillaria is an excellent generic name, as it points out a character peculiar to the genus, namely, the mammæ, or nipple-like tubercles which clothe the stem. It is not easy to persuade horticulturists to drop a well-established plant name, but I fancy you might as well ask us to find some other name for the Rose as to ask that we shall call a Cactus something else.

Colonial Fruit. — Our horticultural and agricultural friends at the antipodes promise to supply the English market with fruit in as great abundance, and consequently as cheap, as the beef and mutton which now come from there. Tasmania announces that a shipment of apples for England will be made every week for thirteen weeks, beginning on February 25th, and that the grand total of cases intended for us will be close upon 200,000. We are also informed that a few thousand cases "only" will be shipped from Victoria and other Australian colonies. Three steamers, bringing large cargoes of fruit from the Cape, have lately arrived here, but owing to bad management much of the fruit arrived in an unsatisfactory condition. Grapes, peaches, nectarines, greengages, plums, melons, pears, apples and tomatoes were the principal consignments. I believe the chief cause of failure with such fruit as this is the cold of the "cool chamber." Shippers should try warmer and drier treatment for fruit grown under tropical or subtropical conditions.

London. *W. Watson.*

Plant Notes.

The Cherokee Rose.

We not long ago published a note on this Rose, and, indeed, we have often spoken of its attractive qualities, but it is one of those plants which it is difficult to overpraise. In one of the earlier volumes of Garden and Forest (see vol. i., page 235) there was an illustration of a hedge of this plant in Florida, with some of its long pendulous branches cut away to keep it within reasonable bounds. In the present number (see page 115) we publish an illustration of a flowering branch in which the quality of the individual flowers is brought out more clearly. The practice of spending a part of the winter in the southern states has become so general that most northern people are now familiar with this plant, but those who have never seen it can get a fairly good idea of the character of the flowers from the illustration, when it is remembered that they are considerably reduced, each one being two or three inches across, of a clear white, which appears to the best advantage against the dark evergreen leaves. The plant was naturalized in this country so early that Michaux pronounced it indigenous more than one hundred years ago. But, although we have no record when it was first introduced or how it broke away from the garden and made itself at home in Georgia and spread through the other southern states, botanists usually agree that it is an Asiatic species. It has become so thoroughly naturalized in the land of its adoption, however, that it is seen along the highways, forming high hedges which become at length lofty thickets twenty or thirty feet thick, and absolutely impenetrable. It is as much at home, in fact, as the wild Orange in Florida, or the Barberry on the New England coast. No more beautiful spectacle can be imagined than a long vista bordered with these plants, with their rampant growth and profusion of flowers.

Of course, the Cherokee Rose is tender in the north, and it is such a vigorous grower that it does not give much satisfaction as a pot plant. It is well worth setting out, however, in any large cool greenhouse, where it can be planted in a border in rich well-drained soil, and trained to the rafters and walls. It needs full sunlight and all the air it can get during the warm weather, and, when once well established, it should be cut back almost as closely as a grape-vine. Hardwood cuttings taken in autumn will make a plant fit to set out in the open border the following June, and, if well grown, it will be large enough to flower the next January. Severe pruning will not be needed the first year, but, afterward, the old wood should be cut out every year in March or April to encourage new shoots, and it should always be well fed when it is growing. In its native state it blooms in April, but by proper pruning the time of flowering can be somewhat regulated, and it can be kept in bloom from January to March. Occasionally flowering branches of the plant are seen in florists' windows, but it would hardly pay here as a commercial plant, since it needs a long time to become established, takes a great deal of room, and then bears but one crop, and not a very long one, every year. It is, however, a most desirable ornament for any large cool house.

The illustration on page 115 is from a photograph by Miss Edith Eliot, of New Bedford, Massachusetts.

Asparagus retrofractus arboreus. — This plant, introduced to cultivation by Messrs. Lemoine in 1890, seems very distinct from other species of Asparagus. The stems are light colored, as large as a Rye straw, but solid and almost woody, the specimens we have seen under ordinary culture reaching a height of six or seven feet. The chief peculiarity, however, is in their so-called leaves, which are borne on numerous short side stems. These leaves are thin and are arranged in clusters like those of a Pine-tree. Their color is light green. The leaves are attractive and lasting for use in foliage effects with delicate flowers, and will be appreciated as a change even from the beautiful Asparagus plumosus. The plant would also be attractive for foliage decorations. Perhaps this species may not be readily increased so as to make it a plant of commercial value, but it will, we think, be appreciated in private greenhouses.

Bignonia venusta. — Where one has plenty of head-room in a cool or intermediate house there is nothing better than this good old Brazilian plant for winter blooming. It begins to flower during the dull season, November and December, and continues until the middle or end of March; the warmer the house the earlier the flowers. They are borne in thick clusters in long pendulous racemes, often three feet or more in length, and are of good size and of bright orange-yellow color. Very few greenhouse plants show such immense and showy masses of bloom as this Bignonia. Unfortunately, the flowers are not very useful for cutting; they fade quickly unless they can be kept wholly or partially submerged in water; occasionally, however, they can be used with good effect in large decorations where they need last for an hour or two only. It is for greenhouse adornment that this plant is principally useful, where there is a back wall or high gable to be covered, or where a quantity of pendent vines will not interfere too much with the plants growing below. It should be planted in a well-drained border, in rough soil, rotted sods and peat, and care must be taken to keep the roots somewhat confined—that is, too much root-space is undesirable. The strong growth is during the summer months, terminating with the flowers in early winter. After flowering, the plant should rest; the leaves will fade and fall, and water must be given sparingly. The last of May, or in early June, a severe pruning should be given; all the new wood, now fully ripened, should be cut back to two eyes, unless it is desired to extend the amount of space occupied by the plant, when enough for such purpose should be saved. The weak wood should be removed, and any superfluous older stems cut out. Water should now be given, and the vine should be syringed daily. It will break freely and grow rapidly; any weak growths should be pinched out, and the stronger ones carefully trained, but never headed in, for it is on the ends of these shoots that the flowers will come. To check the

mealy bug, which is the only troublesome insect, the old stems need careful cleaning; the foliage should be washed frequently with hose or syringe up to the time of blooming. The propagation is somewhat difficult from cuttings, which should not be made of the very newest growths, but it is comparatively easy by layering in pots, using the new growths in August and September.

OSMANTHUS (OLEA) FRAGRANS.—This is one of the charming old-fashioned greenhouse plants for which the modern commercial florist apparently has little use. It is an evergreen shrub, a native of China, of rather slow growth, but not at all exacting in its requirements. Beginning in early December and continuing through March, it produces abundant clusters of small whitish flowers of most delicious and delicate fragrance, quite unlike the scent of any other flowers, and as difficult to describe as the color of a Safrano Rose. It is said that this flower furnishes the flavor used to scent orange Pekoe tea, a statement that can readily be believed, the fragrance is so oriental. It should

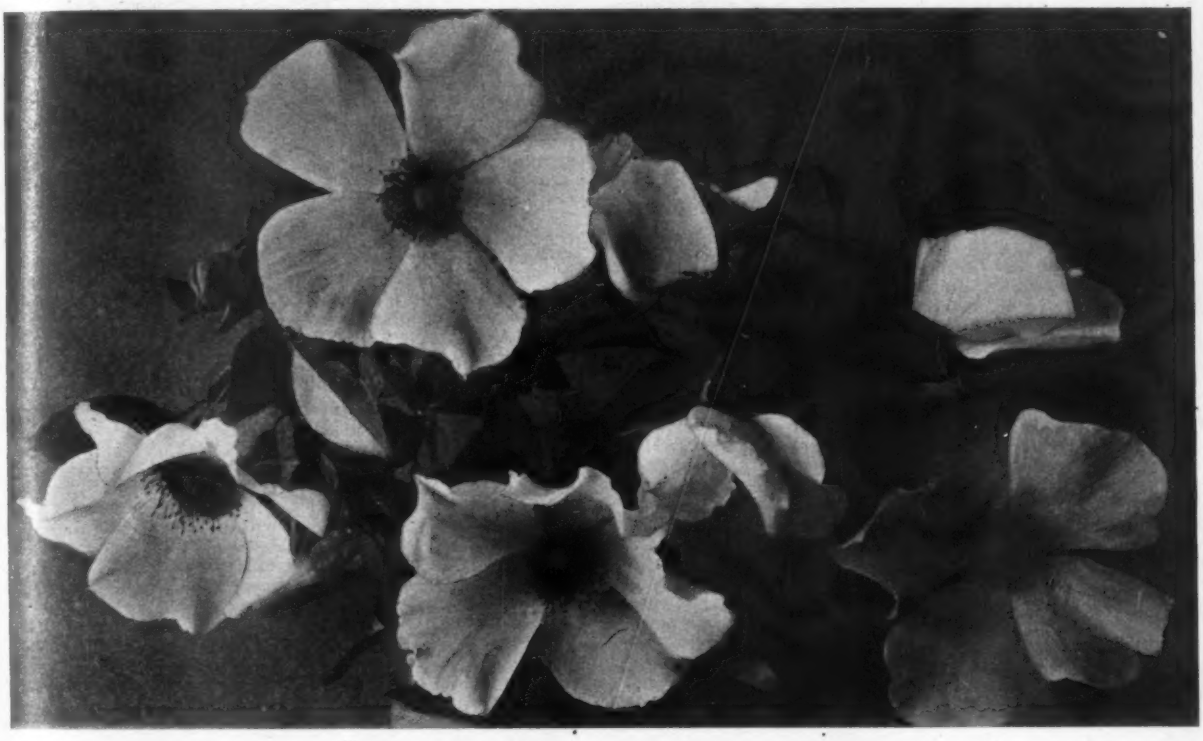

Fig. 18.—A Flowering Branch of the Cherokee Rose.—See page 114.

be grown in a cool house and not overpotted. The drainage should be good, and when repotting is necessary the shift should be a moderate one in March or April. The soil should not be too fine, with some peat and plenty of sharp sand. The propagation is by cuttings of hardened wood in January and February. It is the best plan to keep the leaves entire, removing those only which interfere with the proper placing of the cuttings; neither bottom-heat nor glass coverings should be used.

Cultural Department.

Lilies.

THE sooner work is begun in the outdoor garden the better it will be for many plants next summer. Many herbaceous plants begin to make root as soon as frost has left the soil, and this first start should, if possible, be made where the plants are to grow. This is especially true of Lilies, the fall planting of which is always desirable. But as a large proportion of the bulbs cannot be purchased until winter has set in, spring planting is often a necessity; the Japan Lilies, for example, have only recently been received.

Japan and China have contributed to our gardens to a surprising degree, and much that has been credited to Japan has probably come from China, but has been received through Japanese channels. But, whatever their original home, we should seriously miss them from our gardens, and our Lily-beds would suffer greatly if deprived of the species from the east. Some of these do not last long with us, as in the case of Lilium auratum, which we rarely hear of as thriving for more than a season or two at most. I have certainly never seen it established like the varieties of L. speciosum. A Lily more generally seen each year, as its good qualities become known, appears to be a natural hybrid between L. auratum and L. speciosum, and is known as L. auratum platyphyllum, or L. auratum macranthum. It would pass for the true L. auratum in all respects but for its broad foliage, which is quite as broad as that of L. speciosum, and the bulbs live and increase year after year, as do those of L. speciosum, in our gardens. This Lily is more expensive than some of the other kinds at first cost, but once purchased it does not need to be replenished, and it blooms regularly every season. Another good hardy Lily is L. Wallichianum superbum, one of the most beautiful Lilies known, a native of the Himalayas. It promises to be popular, since it is easily propagated, rivaling the old Tiger Lily in ability to make young bulbs on the flower-stems at the base of each leaf, many of which will flower the second year. It is quite possible that we may yet see it grown in greenhouses as generally as the well-known L. longiflorum, which it resembles in some respects. The flowers are tubular, rosy-brown tinted outside, and white, with a rich yellow inside, that has given rise to the name L. sulphureum, which is now regarded as the correct name by authorities on Lilies. While this Lily has proved perfectly hardy in Massachusetts without any protection at all, it is better to give it the usual covering of dry leaves in autumn, as is the practice with other kinds.

Other new and beautiful kinds of Lilies of recent introduction are Lilium Alexandræ, said also to be of hybrid origin between L. auratum platyphyllum and L. longiflorum. If it is really a natural hybrid some time must elapse before it can be disseminated in any numbers. The new L. Henryi, a native of central China, with the form and rich red spots of L. speciosum, is of a uniform rich apricot-yellow in color. At Kew this fine

Lily is said to have proved hardy and strong, making stems over eight feet high, and producing as many as fourteen flowers on a stem. It increases rapidly under the same cultivation given to other kinds, and is, no doubt, a true species, having foliage resembling that of L. speciosum. This valuable acquisition suggests that the interior of China holds many beautiful plants desirable for our gardens as yet unknown to cultivation and to science. For L. Henryi we are indebted to Dr. Augustine Henry, who found it growing in two places only, near Ichang, on grassy slopes, at 200 to 2,000 feet elevation. The probabilities are that it will prove hardy in this part of the United States.

Among rare Lilies should be named Lilium speciosum Melpomene, a very richly colored form, perhaps the richest of all the varieties of L. speciosum. While it is rare in cultivation, other forms being substituted for it, it should not remain so, for it is not much more expensive than the others, costing about one-third more, and is far more beautiful. An importation of this sort is now daily expected, and we hope to have a fine group of this variety and the best of the white forms, L. speciosum album præcox. The latter make a good contrast, and flower about the same time, whether in pots or planted out in the borders.

Lilies which have been protected during winter must not be uncovered too early in April, and a little protection is necessary until all likelihood of frost is past. The young growing shoots are very easily injured by frost, especially if there is no protective growth near them, such as is furnished by a Rhododendron-bed. If the shoots are already above ground when the bed is uncovered they should be covered over with a handful of leaves and left to come through naturally.

South Lancaster, Mass. *E. O. Orpet.*

Cannas.

THE advance of the Canna to its present position as an ornamental plant is one of the marvels of modern horticulture. Unlike the Star of 1891, which created a sensation when first introduced, Madame Crozy still remains among the indispensable varieties, and a large percentage of recent introductions are seedlings or derivations from this remarkable plant. The yellow border on its petals has given the cue to efforts in the direction of a pure yellow, and this seems to have been the aim of nearly all raisers of new varieties. Improved forms of Madame Crozy have been the result, but the type after all is probably the best. Its moderate height, handsome foliage and short compact spike make it the ideal. Improvements, however, have not been altogether on this type. In crimsons we have Charles Henderson and Alphonse Bouvier; the former has the larger spike, finer flowers and dwarfer, sturdier habit. Alphonse Bouvier is an abundant bloomer, but is much taller; these two hold a superior rank in their color. Captain Suzzoni is the best yellow of the sorts that now can be called standard. It is not, however, a pure yellow, though the orange-red spots are so faint that for general effect it may be classed as such. Florence Vaughan is an elegant Canna as far as quality of flower and size of spike are concerned, but it is hardly a yellow variety, and should be classed among the spotted varieties. It has the finest yellow ground with scarlet spots of any Canna yet sent out. Captain Suzzoni as a winter bloomer is superior to Florence Vaughan, and in this respect it is equal to Madame Crozy, Taken from the border last autumn it has bloomed continuously all winter, and is now the brightest and best of any. Florence Vaughan received a check, indicating its relation to the older types, which needed some resting. Paul Marquant is a fine satiny salmon, free, and first-class in every way, especially as a winter bloomer. Paul Bruant is a beautiful orange-scarlet, large in flower and one of the first bloomers. This also has proved an admirable greenhouse variety this winter.

Among dark-leaved varieties, J. D. Cabos, with bronzy leaves and salmon flowers; Egandale, with crimson flowers, and the first bloomer of any, and President Carnot, the handsomest in foliage, make a beautiful trio. J. D. Cabos is hardly comparable with either, the glistening salmon-tinted flower contrasting beautifully with the metallic lustre of the foliage. These are the best varieties now in general cultivation.

In novelties every one is inclined to have favorites of his own. Last summer and autumn I made it a point to note the coming introductions. Eldorado will prove to be one of the finest yellow-flowered sorts this season. It has a large flower, as fine a spike and as good in habit as Madame Crozy, and it is practically yellow. It has some markings, but not enough to detract from the brilliancy or effectiveness of the flower. Every one who sees it is enthusiastic over it. It is very showy and must become popular. F. R. Pierson will probably be the best scarlet of the season. It bears an ideal flower, brilliant in tone, with only a delicate penciling of pure gold at the centre of the flower, which seems to intensify the scarlet. The petals are very large, round, overlapping each other, reaching near what we must sooner or later obtain in this desirable class of bedding plants—a perfectly round flower. The Belle of Newport is, so far, the only pure yellow Canna. It is very dwarf, and in this respect promises to be of exceptional value as a bedder. It, however, lacks size, but, no doubt, it will be found valuable for hybridizing with the larger-flowered varieties, and may lead toward a new race of dwarf yellow varieties. The flower of the new so-called Butterfly Canna, Golden Wings, may be described as having a deep yellow ground, heavily blotched with brownish crimson. It will be a fitting companion to Queen Charlotte, a novelty of German origin—a scarlet, heavily banded with yellow. Both are beautiful and distinct, and especially adapted for effect when used with the darker-leaved varieties in masses. For bedding purposes, and especially for lines, Oriole will probably surpass any of the banded yellows yet introduced. Columbia is a novelty of American origin, and a very distinct break in character. The heads of bloom are most compact, deep cardinal-red, without any shadings; the spikes branch, and the flowers remain on longer than those of any other variety, a most valuable characteristic. Sunshine is much in the way of Paul Marquant, an unusually free bloomer, and bears the largest flower of any Canna I have seen. It has a soft, satiny lustre, and is not excelled by any of its color. Admiral Avellan I consider an improvement on J. D. Cabos, and this is saying a good deal. It is well worth a trial where a handsome bronzy-leaved variety, which is also a good bloomer, is required. General de Miribel is a good spotted salmon of splendid habit and fine large flowers, and Gladstone is a distinct and pleasing novelty with buff-colored flowers, bordered with yellow. Mrs. Fairman Rogers is a variety in the way of Madame Crozy, which has been honored with a silver medal by the Massachusetts Horticultural Society. The flowers are more heavily banded with yellow than those of Madame Crozy, but its principal value lies in the great size of its branched flower-spike. Its habit is dwarf, and promises to be the best of the Crozy type yet introduced.

Wellesley, Mass. *T. D. Hatfield.*

Cut Flowers for Summer.

IN choosing the location for the cut-flower bed, when beginning garden work in spring, a good water supply should be considered, for during a dry season frequent and thorough waterings will be needed to insure an abundance of flowers. Among the plants readily procurable and particularly useful for this purpose are Bouvardias. Old stumps of these plants which have been in use in the greenhouse during the winter will answer well if cut back closely and allowed to break again before being planted out. The most satisfactory varieties are Davidsoni, The Bride and Elegans; the single varieties, as a rule, are the most floriferous. Stock plants of Heliotrope will also give a regular cut of flowers during the summer, and should be treated in the same way as the Bouvardias.

Carnations are apt to be somewhat scarce in the early summer, unless some of the plants of the former season have been kept over winter in a cold frame. Another plan is to keep the old plants in the greenhouse until outdoor flowers become plentiful. Successive sowings of China Asters should be made in order to prolong the flowering season, for, though these are rather formal flowers, they are useful and add much to the brightness of the garden. Successive plantings of Gladiolus bulbs will also provide good cut-flower material. For this purpose some of the older and less expensive varieties are useful, as, John Bull, Shakespeare, Princess of Wales and Brenchleyensis. Rather deep planting is required for these bulbs. From four to six inches is a good depth, but this may be varied according to the nature of the soil.

The first outdoor sowing of Sweet Peas should be made just as soon as the condition of the ground will permit. In some localities fall sowing is practiced with much success, but, whatever plan is adopted, an abundant water supply is essential to success in our hot summers, and, as is well known, the more the flowers are picked the more freely will they be produced, as the formation of seed-pods checks the growth of Sweet Peas.

Helianthus multiflorus and its double-flowered form are both useful in the herbaceous border and for cutting. Their brilliant flowers are highly decorative when tastefully arranged, and are not so coarse as those of many of the Sunflowers. Roses will naturally suggest themselves to every flower lover, and Marie Guillot, Papa Gontier, Marie Van Houtte, La France and Perle des Jardins are generally satis-

factory as outdoor flowers. A few plants of scented Geraniums should also be included in the cut-flower section of the garden. These will provide a plentiful supply of foliage for mingling with the flowers; for this purpose the varieties having finely cut leaves are most suitable, as most of the scented Geraniums are likely to make a rather coarse growth when planted out in good soil.

Holmesburg, Pa. *W. H. Taplin.*

Phajus grandifolius.

THIS evergreen terrestrial Orchid is an old favorite, having been in cultivation for more than a century, and, although one of the first Orchids introduced into cultivation, it is still grown in almost every collection of these plants. The first specimens were brought into England from China, where it is a native, in the year 1778, by Dr. John Tothergill. Some time afterward it was found to be a native also of the lower Himalayas, Cochin China and eastern Australia.

The plants now growing here were collected by me three years ago in the mountains of Jamaica, where Phajus grandifolius is abundant. Although so plentiful there, I was told that it is not a native of that island, but was introduced about a hundred years ago, and has become thoroughly naturalized. It is found there at elevations ranging from 1,000 to 5,000 feet. I found the largest and strongest plants at an elevation of about 3,500 feet. They grew in rich loam in an open space which looked as if it had been a garden at one time, and they were unprotected from the hot tropical sun. In the same piece of ground Bletia Shepherdii grew plentifully.

Phajus grandifolius has ovate pseudo-bulbs, and these when well grown are the size of a large Hyacinth bulb and are sheathed by the imbricating bases of the fallen leaves. The large, dark green leaves are oblong-lanceolate and thirty to forty inches long. Our plants are grown in nine-inch pots, and there are seven or eight flower-spikes to each pot. Many of the spikes are four feet in height and carry twelve to sixteen flowers each. The flowers are four inches across; the sepals and petals oblong-lanceolate, yellowish brown on the inner side and silvery white on the outside. The projecting lip is of a tubular shape, about an inch and a half long, white, with a dark crimson-brown throat. These plants are easy to grow and flower, but if large, well-flowered specimens are desired they require attention and care. The plants should be repotted in spring when they are beginning new growth. They flourish in a compost of fibrous loam, leaf-mold and a small quantity of dried cow-manure. During the growing season they like a warm, moist atmosphere and plenty of water at the roots, and occasionally a little weak liquid-manure. They do well in an intermediate house during the summer, and when the leaves are fully grown they should have cooler treatment and they will then need less water.

Harvard Botanic Garden. *Robert Cameron.*

A Few Annuals.—III.

MENTION should be made of the so-called Everlasting Flowers, which are curious and sometimes quite pleasing. Their vogue in cemetery wreaths and bouquets of dyed and bizarre grasses has somewhat abated, and funereal associations have, perhaps, been the occasion of their waning popularity; but a few of them are ornamental in a garden, and they are by no means to be despised when dried and tastefully arranged in vases, especially if fresh flowers are scarce. The prettiest of the Everlastings are the Acrocliniums and Rhodanthes.

Many climbers are useful in furnishing cut flowers as well as ornamental in the garden, where they can be made to cover bare spaces quickly and effectively. As merely ornamental plants they vary greatly in value, and the annual climbers are not as valuable as the hardy ones, with which a garden can in time be more satisfactorily furnished. Of tender vines, after Sweet Peas, which have already been noted among the best annuals, the Morning-glories, of course, easily lead all others in popularity. Ipomœa major, the ordinary form, has seeds which will grow for any one, and which it will in time distribute only too generously. As can be seen in any catalogue, there is a great variety of Ipomœas, many of which are beautiful, and yet have seeds which, fortunately, are not so hardy. The so-called Heavenly Blue, which is the old Ipomœa rubrocœrulea, is one of the most desirable. The night-blooming kinds are curious, and may sometimes be seen open on cloudy days. The I. (Mina) lobata is scarcely worth growing, since it is uncertain in flowering, and the flowers, when they do appear, are of unsatisfactory color. Mina sanguinea is better, having bright scarlet flowers, which are borne very freely, and will be welcomed as a change from Cypress-vines (Quamoclit), whose usual supports of strings and hoops are so prominent in some gardens. Many of the Ipomœas flower shyly, but all are very prolific of foliage. The Allegheny-vine, Adlumia cirrhosa, is a native plant of great beauty. It is perfectly hardy, a biennial, which during the first year has a Fern-like effect. The second season it runs freely and produces very pretty small, nearly white, flowers. It is more attractive, however, without the flowers, which soon fade, and give a ragged effect to the plants.

The Cobæa usually proves one of the most satisfactory annual vines, as it produces most effective large flowers. The flat seeds are easily ruined in the seed-bed if carelessly watered. However, if planted on edge and carefully tended in a temperate atmosphere, they will germinate safely and grow away rapidly.

Thunbergias are very pretty in gardens, especially when allowed to grow untrained. Their hard seeds germinate slowly, and they require strong heat.

Maurandia Barclayana is the prettiest of the delicate or small-foliaged vines. As it has fair-sized handsome flowers, which it produces very freely on the rapidly growing stems, it may be rated as the best of the smaller annuals.

Climbing Nasturtiums cannot be spared from any garden, but these have been listed among the best annuals. Humulus Japonicus, Japanese Hops, may more readily be omitted from the garden, unless some wild place is to be covered by a rapidly growing vine which will surely replace itself by seeds, and these it produces in myriads. I do not know of any plant, unless it is the Centaurea and Petunia, which distributes its seeds so uniformly over a garden, and every one of them seems to germinate. Yet I have known people for whom Japanese Hops would not grow.

If one has available space in the back garden, an assortment of Fancy Gourds will be found very interesting, especially to the younger members of the family. Their quick growth is of daily interest, and the fruits are so pretty or curious or grotesque, as to make the fruiting time one to be pleasantly anticipated.

Elizabeth, N. J. *J. N. Gerard.*

Celosias.—These useful plants of the summer months can be grown by any one who will give a reasonable amount of attention to them. Celosia plumosa and C. cristata are both well worth growing, as they are so useful for cool greenhouse, conservatory or terrace work. In the latter place they will stand a long time, and their showy appearance always attracts attention. Seeds of a good strain are especially needed in growing these plants. Good seeds will germinate in any fairly light soil if placed in a good moist heat. It is best to cover the pan with a piece of glass until the seed is up. As soon as the plants are large enough to be handled they should be pricked off into flats, but kept in a brisk heat, as they should not receive any check after they are once started. As soon as they are large enough they should be potted into four-inch pots, preferably in a rich compost of loam, leaf-mold and cow-manure in equal parts. At the last, six-inch pots should be used for plants of C. cristata, and a size larger for C. plumosa. I use a little commercial fertilizer, for they are vigorous feeders and must have plenty if they are to form fine heads. They should be kept in a moist heat to protect them against red spider, and the heat of a slow hot-bed is just the place for them, as the glass keeps them dwarf.

Different strains of the Cristata type show the combs at different periods, some when in small pots, others after the last potting, and some of the best heads are formed from these. This is a good time to sow seed, and some may be sown later to give a second lot. With a minimum temperature of sixty-five degrees and plenty of moisture and manure strong plants will be assured.

South Lancaster, Mass. *W. Downs.*

Correspondence.

The Hardiness of the Rose Crimson Rambler.

To the Editor of GARDEN AND FOREST:

Sir,—I have been much interested in what you have said about the Rose Crimson Rambler at various times for several years past, and now that American dealers have plants on sale I should like to inquire whether the experience of the past winter has proved that they are hardy?

Babylon, L. I. *S. A.*

[It is too early to answer such a question definitely. Plants may survive one year, even a very severe one, and yet fail at another time under apparently less trying circumstances. We have inquired of several of the firms who

advertise the Crimson Rambler in our columns, and, so far as we have learned, the probabilities are that the plant will prove hardy. Messrs. Ellwanger & Barry write that plants of this Rose which have been out-of-doors all winter with the same protection that is given to other hardy Roses prove to be in first-class condition now, in the middle of March, having borne the winter as well as any others. It is further said that some of the tips of the Crimson Rambler which had not been covered at all have escaped so far without the slightest injury, which indicates that some kind of winter protection is given. Mr. A. Blanc writes that some of their plants of the Crimson Rambler have been left out at West Grove, Pennsylvania, all winter, and have so far withstood the severe weather without any apparent injury. Mr. Patrick O'Mara, of Peter Henderson & Co., reports that they left out four plants of this Rose, one on each of the four sides of a house in Hackensack, New Jersey, so that the plant could be tried in every exposure. Both the wood and the buds of these plants are still plump and perfectly sound.

It is to be hoped that these prophecies of hardiness may prove true, because large plants of this Rose when in bloom, as we have seen it in England, are objects of striking beauty. Even if it should not prove quite hardy, it would be very valuable for conservatory decoration.—Ed.]

Some New Hybrid Roses.

To the Editor of Garden and Forest:

Sir,—A few days since I received a box of charming roses from Jackson Dawson, of the Arnold Arboretum. As these were new hybrids and most promising, a few notes of them ought to interest those who appreciate the value of Roses which are useful for other purposes than the mere furnishing of cut flowers. These Roses are all from stock of Rosa multiflora, or rather they are seedlings of the delightful Dawson Rose, a cross between R. multiflora and General Jacqueminot, fertilized by pollen of Madame Gabriel Luizet and General Jacqueminot.

Of the flowers sent me, I was especially attracted by one which was a most exquisite little one, no larger than Rosa multiflora, but double, very fragrant, and a clear, light rosy pink color. Its pollen parent is Madame Gabriel Luizet, and it seems of the same habit and free-flowering character as R. multiflora. I can imagine no more beautiful floral sight than a trellis covered with a plant of this in bloom. There were others, double and semi-double, ranging from the color of Apple blossoms, through various shades of rose to a clear dark cerise. In size they vary from the small flowers noted above to some two inches in diameter. Judging from the flower-sprays, there appears to be the same variation in their habits as there is in the quality of their perfume.

These Roses received a silver medal last June from the Massachusetts Horticultural Society, and they are sure to be valued by those who have been awakened by the beauty of the more simple flowers of the species which are now finding favor in the best gardens.

Elizabeth, N. J. *J. N. Gerard.*

Market Flowers in Private Gardens.

To the Editor of Garden and Forest:

Sir,—I am much interested in your reports of the Carnation exhibition in Boston. That a society should be devoted to the development of a single flower; that meetings should be held to discuss the merits of its different varieties, to compare the results of different methods of propagating and cultivating it, and to listen to learned dissertations on its fungous enemies by scientific experts; and that exhibitions consisting of these flowers almost exclusively should attract crowds of visitors—all these are novelties in the history of American floriculture, and they certainly promise to instruct the public on every essential point which the growers of Carnations need to know. We sometimes hear certain flowers sneered at as fashionable, but a flower is not likely to gain such a position unless it has genuine merit. Certainly the Carnation excels in many ways. It has bright color, attractive form and exquisite fragrance. It has foliage, too, which heightens the effectiveness of the flower, and I confess to some feeling of surprise that in the reports of all your correspondents I saw not a word about the foliage as a part of the beauty of the plant. A flower with a stem as stiff as a lead-pencil and two inches across was sure to get commendation, while everybody knows that a Carnation flower is never so beautiful as it is when seen in connection with its own leaves, and the leaves of some varieties are much more effective as a foil and setting to the flower than others.

Perhaps the reason of this is that Carnations sell without regard to their foliage, and it is not surprising that commercial growers should devote themselves to supplying what people are willing to pay for. They do business with the same motive which impels other business men, and it is right that profit in business should be their original aim. We often hear flowers grown by florists spoken of contemptuously as something inferior to those grown in private places, but it is very plain that a different purpose ought to rule in a commercial establishment and a private establishment. All the efforts that florists are making to produce flowers of the greatest substance and lasting power and availability for their particular use is commendable. If it will pay them to grow nothing but Carnations, and even only one variety of Carnation, this is the one thing they ought to do. But is this quite the best way to manage a private collection?

This is just the point to which my long preamble is tending. While it is undoubtedly the proper course for a commercial grower to grow the few things that will sell, one would think that a man with a private collection would derive greater satisfaction from growing a variety of plants. Certainly he will not get the greatest enjoyment out of his garden if he devotes it mainly to flowers which can be bought in the nearest florist's shop. There are scores of plants which have a beauty so delicate that it makes them unprofitable to sell either as plants in flower or as cut flowers, and one cannot help but feel that the place to find such things is a private collection. One can go to a commercial establishment and thoroughly enjoy half a dozen houses full of Carnations and admire the skill with which they are cared for. In the same way, long houses filled with Roses for market are interesting to every flower-lover, but why a man with a range of greenhouses for his own enjoyment should have in them little else than flowers which can be bought on a street-stand is surprising.

While the quality of florists' flowers is growing better year by year, it has sometimes seemed to me that the quality of the collections in private glass houses and private grounds is deteriorating in variety and growing less and less interesting. Of course, it is hard to prove such a statement, and the natural reply to it is, that, as we grow old, memory throws a rosy halo over the past and glorifies all we saw in youth, while if we could see the real thing now it would look much less attractive than the imaginary one does in our musing moods. But I think I can remember fine old places along the Hudson and in the suburbs of Philadelphia and Boston where there were once collections of beautiful hardwood plants, and the same houses now are filled with soft stuff to furnish cut flowers. In fact, there are many choice old plants which I hardly know where to look for in these days. Once we used to see plants which were not rare or hard to secure, but which were grown into such magnificent specimens that they compelled admiration simply for their size and luxuriant vigor. We now see fine Palms and Cycads, Dracænas, and the like, and often they are crowded together in such a way that the individuality of every plant is lost, and the house looks like a tropical jungle. But there is a generation of Americans growing up who have never seen a well-grown Fuchsia, for example. What I am trying to say in a roundabout way is that whether it be the fault of owners of plant collections, or of their gardeners, these private places are wasting their opportunities in trying to compete with florists in growing florists' flowers, and that where these great private gardens are devoted to anything besides the furnishing of cut flowers, they do not so much seek to attain what is beautiful as that which is odd and expensive.

Syracuse, N. Y. *R. A. Weyman.*

Jasminum nudiflorum.

To the Editor of Garden and Forest:

Sir,—From this latitude southward, where Jasminum nudiflorum will survive our winters in the open air, it almost always shows some flowers with the warm days of early March. So far, however, not a bud has expanded. We have potted plants in cold storehouses which are now beautifully in flower. We often use this plant as a climber among other vines in pots, and we invariably get a fine display from it in February and March. It might be used in this way to advantage much oftener than it is now.

Germantown, Pa. *Joseph Meehan.*

Recent Publications.

The Silva of North America: A Description of Trees which Grow Naturally in North America, exclusive of Mexico. By Charles Sprague Sargent, Director of the Arnold Arboretum, Harvard University. Illustrated with figures and analyses drawn from nature by Charles Edward Faxon. Volume VII. Lauraceæ-Juglandaceæ. Houghton, Mifflin & Co., Boston and New York. 1895.

The purpose of this work and the way in which it is being carried out are both so well understood, that it is only needed here to glance at the contents of this volume to show that our rich forest flora continues to sustain the interest in the subject which was aroused by the appearance of the first volume. In addition to the great Laurel Bay of California, Umbellularia, the Perseas of our southern Atlantic and Gulf coasts, and several other species of comparatively limited range, such well-known trees as Sassafras, four species of Elm, two of Hackberry, two of Mulberry, three Sycamores, four Walnuts and eight Hickories are described in this volume. Of the fifty-four plates, from drawings by Mr. Faxon, it only needs to be said that they continue to show that accuracy and refinement which place them in the very front rank of work in their class.

The Florida Sketch-book. By Bradford Torrey. Houghton, Mifflin & Co., Boston and New York.

This is a reprint of a series of papers written for the *Atlantic Monthly*. Their aim is simply to embody Mr. Torrey's recollections of a pleasant vacation tour, part of which was spent in the wilds of eastern and southern Florida, part in the hilly region in the northern part of the same state. The writer visited Florida for the purpose of studying the birds of this semi-tropical region, and of contrasting their habits with those of the same and kindred species in their New England home. The subjects are such as would suggest themselves to a naturalist while exploring new fields, but the treatment is individual, and the whole book has a delightful atmosphere and reflects throughout the charm of a happy personality.

It is refreshing, in these days, when there seems no end to the making of Nature books, to come upon some unpretending little volume like *The Florida Sketch-book*, which displays on every page the clear vision of the true observer. For Mr. Torrey's touch, though light and often playful, as should be the touch of one who writes in holiday mood, is always firm and true and sometimes exquisitely tender. Underlying the bright fancy and gay humor, which are characteristic of his attitude toward Nature, is a solid base of accurate knowledge, combined with a delicate appreciation of every phase of natural beauty. He has, moreover, something of the poet's gift—that perceptive sympathy with the life of Nature, which is as incapable of analysis as the color of the rose or the perfume of the violet, and which separates by a narrow though impassable gulf the record of the true interpreter from that of the mere "suburban reporter." This gift manifests itself with as much certainty in some apparently careless allusion to the habit of a flower or the ways of a bird, as in the formal word-painting of a landscape. And, although Mr. Torrey may not have realized Thoreau's ideal description of a flower, so that he can reveal what the child sees in it to admire and love, he often, by a delicate imaginative touch, establishes at once some subtile sympathy between the reader and the inhabitants of the woods or fields. Thus, when he speaks of the Mullein stalk as "presenting arms along the roadside," the soldierly bearing of the plant is given at a single stroke, and when he characterizes the Partridge-berry as a "Yankee in Florida," we feel the breath of northern woods in the monotony of the Pine-barren.

In Mr. Torrey's interpretation of bird-life we find the same full sympathy. Sometimes it is revealed in an elaborate study of an individual, as in his description of the omnipresent great blue heron, familiarly known as "The Major," which is always at home near the water, and there is water everywhere in Florida. "On the beach, as everywhere else, the heron is a model of patience. To the best of my recollection I never saw him catch a fish there; and I really came to think it pathetic, the persistency with which he would stand, with the water half-way to his knees, leaning forward to the breakers, as if he felt that the great generous ocean, which had so many fish to spare, could not fail to send him at last the morsel for which he was waiting." No reader can forget the happy phrases in which the tree-top flirtations of the flickers are described; we fairly tire of the monotonous music of the tufted titmouse, which pipes on and on without rest or variation, "as if his diapason stop had been pulled out and stuck fast"; and we at once appreciate the preternatural gravity of the pelicans when we are told that the writer could never see even a single pair of them going by in Indian file "without feeling as if he had been to church."

Though the object of Mr. Torrey's tour in Florida is to study the manners and customs of his feathered friends in their southern environment, no sooner does he enter the land, where it is always afternoon, than, in spite of his Puritan inheritance, he yields to that delightful southern insouciance "which takes life as made for something better than worry and something pleasanter than hard work." And he confesses with charming frankness that the pleasantest of all his Florida memories are of the occasions when, forgetting all his botany and ornithology, "he climbed the hill in the cool of the day, and after an hour or two spent on the plateau strolled back again, facing the sunset through a vista of moss-covered Live Oaks and Sweet Gums." One hardly knows where to stop when beginning to quote, and we might continue for pages to show how all the air which rests upon this half-tropical scene is filled with leisure and languor; but Mr. Torrey cannot divest himself even in this golden land of the influence of his New England inheritance and discipline. The quiet and incurious hours, which are so delightful to recall, owe their very fullness of enjoyment to the acute powers of observation which have been trained to act with automatic precision by many a vigorous tramp, with open eyes and alert senses, over New England hills. It is his deep love for his northern home and his familiarity with every phase of its varied beauty which enable him to interpret with so much poetic feeling the vague and evasive charm of the southern landscape. "A Yankee in Florida" might well serve as a subtitle to his little book, for he never forgets New England's woods and hills. Sometimes in a felicitous phrase he contrasts the characteristic features of the northern and southern landscape, as when he remarks that the "pine wood-sparrow does for the southern Pine-barrens what the field-sparrow does for the northern berry pasture." Sometimes the contrast is instructive, as when writing of the unconfined beauty of the road borders, he says: "The southern highway surveyor, if such a personage exists, is evidently not consumed by that distressing puritanical passion for 'slicking up things,' which too often makes his northern brother something scarcely better than a public nuisance. At the south you will not find a woman cultivating a few exotics beside her front door, while her husband is mowing and burning the far more attractive wild garden that nature has planted just outside the fence." Or, perhaps, the reminiscence is full of tenderness, as when in the course of his journeyings he comes upon a solitary hermit-thrush in the thicket, as he occasionally did, and not one of them ever sang a note. "Probably," he adds, "they did not know that there was a Yankee in Florida, who, in some moods, at least, would have given more for a dozen bars of hermit-thrush music than for a day and a night of the mocking-bird's medley." The book is delightfully free from any effort to point a moral, but it again demonstrates that the more one loves his home and the more intelligent is the delight he takes in its natural beauties, the more profound is his sympathy with the novel phases of nature in remote and strangely different regions.

Notes.

Mr. Hamilton Gibson has been invited to give his illustrated lecture on the Fertilization of Flowers before the next annual meeting of the American Florists at Pittsburg.

Mr. J. H. Hale writes to the *Florists' Exchange* that he could find in his orchards last year, where no special cultivation had been used, smooth and fair specimens of the Crosby Peach eleven and a half inches in circumference.

The frontispiece of the *Popular Science Monthly* for March shows a fine portrait of Thomas Nuttall, the famous explorer and botanist, whose *Genera of North American Plants*, published in 1818, moved Dr. Torrey to declare that "it had contributed more than any other work to the advance of the accurate knowledge of the plants of this country." The portrait is accompanied by an attractive sketch of Nuttall's diversified, adventurous and prolific life and of his singular personality.

Antirrhinums are useful border flowers, usually hardy here, and white sorts are especially desirable. At the last meeting of the New York Florists' Club, Mr. W. R. Wood, of West Newton, Massachusetts, exhibited a vase of large pure white flowers, which were said to be a variety of A. majus. The long stems, well furnished with unusually large flowers of perfect purity of color, were most attractive. If this variety flowers as freely as ordinary Snapdragons it ought to be a desirable addition to greenhouse collections.

During the past winter California escaped those periods of cold weather which were so disastrous to fruit-growers in many parts of the world, but at the close of last week there was heavy frost in the Sacramento and San Joaquin valleys, which did great damage to the apricot, almond, cherry, peach and prune crops, as the trees were still in blossom or the fruit had just set. As the Sierra Nevada and Coast Range were both covered with snow, it was feared that the frosts might continue for several nights.

Mr. Jackson Dawson, of the Arnold Arboretum, has raised a hybrid with Rosa Wichuraiana as the seed parent and Rosa rugosa as the pollen parent. The plant has the perfectly prostrate habit of R. Wichuraiana, lying flat to the ground, but with the vigorous constitution of R. rugosa, and large, deep green glossy leaves. The flowers are single, nearly as large as those of R. rugosa and of a clear rose-pink color. If it had no flowers whatever the lustrous leaves and vigorous habit of the plant would make it desirable.

Occasionally vessels from the south of Europe bring over small numbers of what are called nut-cones. They are really the cones of Pinus pinea, in shape and general color resembling somewhat a small pineapple. When brought into some warm place, as, for example, near a steam radiator, the scales quickly begin to reflex, commencing at the base, and turning back release the piñons or edible seeds. The motion of the scales as they open is so rapid as to be plainly visible, and is quite interesting to people who have never seen the spectacle, and this exhibition gives a value to the cone apart from the nuts which it contains.

Dr. Peters, of the Botanic Garden of Gottingen, has been experimenting with seeds taken from different depths of soil in a dense wood from 100 to 150 years old, which had been arable land for many years before it became woodland. His object was to discover how long the seeds of weeds would retain the power of germinating after they had been buried in the soil to a depth where they could not sprout. Soil samples were taken at various distances from the surface to the depth of a foot. These samples were placed under genial conditions, and the seeds which germinated were raised and cultivated to a flowering stage. Although the land had ceased to be arable between 300 and 400 years before, the weeds of cultivation were abundantly represented, and Dr. Peters claims to have proved that the seeds of many field and pasture plants retain their vitality considerably more than half a century.

A summer school of forestry, continuing from the 8th of July until the 10th of August, is to be held under the auspices of the American Association for the Advancement of Education, at Avalon, New Jersey, fifteen miles north of Cape May, on the coast. A large part of this island is covered by forests of Oak, Cedar, Pine and Holly, and there are remarkable dunes which show the effect of drifting sand. The director of the school will be Mr. John Gifford. Dr. Charles Dolley is the lecturer on Zoölogy in relation to Forestry; Dr. T. N. Lightfoot lectures on Geology in relation to Forestry; Dr. S. Egbert lectures on Forestry in relation to Health; Albert B. Entwisle lectures on the Uses of Woods. Students to the school of forestry, for which a fee of $10.00 will be charged, are admitted to the courses of the Assembly in Natural Science free.

From the twenty-sixth annual report of the Park Commissioners of West Chicago, it seems that the parks in that city are suffering from the same abuses of which the Park Board of Buffalo complain. It is said that visitors make walks across the turf and mutilate the plants. There is no cure for such a state of things except a more elevated and refined public sentiment. A community which allows the beauty of its public grounds to be trampled out so far proves itself lacking in certain elements of civilization. The people who are helping to devastate the Chicago parks, the wealthy men in this city who have tried more than once to turn Central Park into a trotting-course, the wheelmen and horsemen who are endeavoring now to confiscate a part of the Buffalo park system for bicycle tracks and speedroads, all belong to the same class. They are not intentionally public enemies. The trouble is they are not yet completely civilized.

Mr. G. F. Scott Eliot, who left England in September, 1893, on a botanical exploration of Mount Ruenzori and the country north of Albert Edward Nyanza, has just returned, and at the last meeting of the Linnæan Society gave an interesting account of his journey. The country north-east of Victoria Nyanza is described as a rolling plain, fertile and grassy, 6,000 feet above the sea, while Mount Ruenzori, where he spent four months, reaches an altitude of 18,000 feet. The sides of the mountain are clothed at the base with a thick growth of trees resembling the Laurel of the Canary Islands, above which are Bamboos to the level of 10,000 feet, and above that again a substance which the explorer could only liken to a Scotch peat moss into which he would sink at every step for a foot or more. Among the plants he saw were a gigantic Lobelia five or six feet high, Hypericums resembling those found in the Canaries, Violets and Cardamines. Large trunks, like those of Erica arborea of the Canary Islands, but indicating trees eighty feet high, were also seen. In addition to a large collection of dried plants, Mr. Scott Eliot brought home and presented to Kew a collection of living plants, including various bulbs and Orchids.

The main dependence for potatoes this year is the domestic crop, which is in striking contrast with the condition of the supply of this staple a year ago. Since October 1st 730,000 barrels of home-grown potatoes have been handled by New York wholesale dealers, 230,000 barrels more than were received here in the same period a year ago. In the same months during the present season only 60,000 sacks of European potatoes came into this port, whereas above 338,000 sacks from Great Britain and the Continent passed in during this period last season. Nova Scotia, Prince Edward Island, Cuba and Bermuda are also minor sources of supply. Potatoes from Bermuda cost fifty cents a half-peck; parsley from the same islands brings seven cents, and beets twelve cents a bunch, while heads of Romaine lettuce cost twelve cents each. Cuba still sends egg-plants, okra, peppers and onions. String-beans from the southern part of Florida are a scarce luxury, and cost the unusual price of a dollar a quart. Small lots of tender and crisp lettuce from Florida find ready sale at good prices, and the first cabbage from that state has been quickly bought up by dealers in choice vegetables at $4.00 a barrel, as high a wholesale price for this quantity as is asked for one hundred heads of northern-grown winter cabbage. Danish cabbage has advanced to $10.00 and $12.00 for a hundred of the firm, large, white heads. Tomatoes from Key West and Havana come in varying grades; those of ordinary quality may be had as low as fifteen cents a quart, the better-colored and more delicate ones costing thirty cents a pound, while choice hot-house tomatoes of uniform size and rich color command eighty cents a pound. The first Charleston asparagus costs $2.50 a bunch. Kale, chicory, spinach and escarole, from Norfolk, are moderately abundant. The only green peas now offered here are the few coming from California, and these cost seventy-five cents a half-peck. The last California cauliflowers sell for fifteen to thirty-five cents a head, and the smaller and whiter hot-house cauliflowers bring thirty-five cents each. Hot-house radishes cost five cents a bunch, and tender young carrots the same price. Rhubarb, from Long Island, is ten cents a bunch, mushrooms seventy-five cents a pound, and Boston cucumbers twenty cents each. Among winter vegetables Brussels sprouts cost twenty-five cents a quart. Half-a-dozen roots of long, well-blanched Rochester celery cost fifty cents; the smaller celery from New Jersey commands half that price. Choice Vineland sweet-potatoes cost fifty cents a half-peck.